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EXAMINER
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HOYE, MICHAEL W

ART UNIT	PAPER NUMBER
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2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/617,036	PAIK ET AL.	
	<b>Examiner</b> Michael W. Hoye	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 November 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 40-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 40-79 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 May 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____.                                     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____.  | 6) <input type="checkbox"/> Other: _____.                         |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicants' arguments with respect to claims 40-53 and 71-79 which are specifically directed to the Tracton et al reference have been considered but are moot in view of the new ground(s) of rejection as presented below.

Regarding dependent claims 44-46, the Applicants also argue that, "the Office Action fails to provide objective factual evidence or proper motivation to turn to Margulis to modify Traction, as suggested. Margulis is directed to a wireless television system "preferably configured for economical and efficient use in a home environment" (col. 4, lines 13-15, for example). As such, it is non-analogous art to Tracton, which is not directed to a wireless TV system, and is not directed to solving the same problem as Applicants or Tracton."

In response to Applicants' argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner refers back to similar remarks/comments made regarding the Margulis reference as described in a previous Office Action mailed on 2/27/06 (see pgs. 3-7).

Regarding dependent claim 49 and the Applicants remarks/arguments directed to the Tracton and Peters references on page 16, the Examiner respectfully refers to the relevant remarks/responses as described above.

Regarding dependent claims 51-53 and the Applicants remarks/arguments directed to the Tracton and Margulis references on pages 16-17, the Examiner respectfully refers to the relevant remarks/responses as described above. In addition, the Applicants argue on page 17 that, “Additionally, Legall contains no disclosure of transmitting television programs and is non-analogous to both Margulis and Tracton.”

In response, the Examiner respectfully disagrees with the Applicants because the Legall reference explicitly discloses transmitting television programs and is analogous to both Margulis and Tracton. For example, in col. 2, lines 17-20, Legall states that, “Receiver 105 in one embodiment is a satellite receiver for receiving satellite transmissions of broadcasts and programming information through antenna 106.” In col. 2, lines 38-66, Legall further discloses that the display shown in Fig. 2 can include a variety of information, such as web sites and television broadcasts, and immediate tune0in is available by selection of a current EPG element in the Window 220. Furthermore, in col. 3, lines 11-17, Legall discloses that, “The search engine 306 interacts with the different information resources, e.g., internet 312, cable broadcast 310 and satellite broadcast 308, to generate a result set 314 of information”, and in lines 20-27, Legall discloses that, “The display may be part of a television and/or processing device 326...[and] As noted earlier, the EPG can be used tune to a broadcast by selection of an EPG element (e.g., program listing).” Therefore, Legall clearly discloses transmitting television programs.

The Applicants further argue on page 17 that:

The alleged motivation to incorporate the EPG searching of Legall into the aforementioned improper reference combination is because “Legall is evidence that ordinary workers would appreciate the ability to search an EPG” Applicants respectfully disagree. Just because someone would want to search an EPG does not mean that they would modify the aforementioned improper reference combination to search an EPG the way Legall does, especially in view of the fact that Legall does not even mention the word “television” in its application and does not deal with wireless broadcast television, like Margulis does.

Accordingly, the Office Action fails to make out a *prima facie* case of proper motivation to modify the aforementioned Tracton-Margulis improper reference combination in view of Legall.”

In response, the Examiner respectfully disagrees for the reasons described above, as well as those presented in the rejection of the claims where Tracton teaches receiving broadcasts at a mobile telephony terminal (col. 7, lines 26-28), Magulis further teaches receiving television broadcast signals including EPG data at a wireless client, and Legall provides additional teaching regarding EPG and web searching, wherein the system is capable of “offloading” the handling of a search to the content provider so that the receiving user’s system does not have to perform the search (col. 5, lines 44-46). Therefore, the portions of each reference cited as combined together are all analogous art and one or ordinary skill in the art would have been motivated to combine each of the reference for the additional benefits associated with each of the features of the references as described above and in the rejection.

Regarding claims 54-65 and 69-70, the Applicants argue on page 17 that:

“[I]ndependent claims 54, 65 and 69 have been amended to positively recite a combination of features that is neither disclosed nor suggested by Margulis or Kumar, including, for example, a transcoding means which converts the provided digital video and audio signal inputted from the digital video and audio input means

into a format and transmission rate compatible with transmission over a transmission channel of the mobile cellular telephone network and provides the converted format video and audio signal directly to an allotting transmitting means; or similar method steps. Because neither reference discloses the claimed features, there is no objective factual basis of record for rendering the claimed invention obvious.”

In response, the Examiner respectfully disagrees with the Applicants because Margulis explicitly teaches in col. 7, lines 36-64 the claimed transcoding means (subsystem processor 518) which converts the programs/broadcasts into a format that is compatible for downstream use, such as down-converting a video bitstream to a bit rate that is more appropriate for economical/wireless transmission techniques, by transmitter 324 and a remote TV 158. As just described, the converted format video and audio signal is sent directly to transmitter 524. Although Margulis does not explicitly disclose the use of a “mobile cellular telephone network”, Margulis does disclose that in alternate embodiments, remote TV 158 may be implemented as a personal digital assistant (PDA) device, a note pad personal computer or any other desired display device (col. 5, lines 27-34). Furthermore, Kumar teaches the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]). Therefore, the Kumar reference provides additional teaching regarding the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers or PDAs and thus provides motivation for combining the two references in order to provide the remote TV capabilities on a mobile cellular telephony terminal or “smart cell phone”

In addition to, the Applicants argue or note on pages 17-18 that because an accurate English translation of the Korean Priority Application, No. 28811/1999, filed on July 16, 1999,

has been provided, and a copy has not been made available of the Provisional Patent Application No. 60/128,138, filed on April 7, 1999, and because the Applicants have been unable to access the Provisional Patent Application on Public PAIR, the Kumar (US 2006/0105804) reference is removed.

In response, the Examiner has provided a copy of the Provisional Patent Application No. 60/128,138, filed on April 7, 1999, so that the Kumar reference is not disqualified as prior art.

Regarding claims 66-68, the Examiner respectfully disagrees with the Applicants arguments on page 18 regarding the Margulis-Kumar combination for the reasons discussed above.

Regarding claims 71-78, the Applicants arguments regarding the amended claim language of independent claim 73 on pages 18-19 do not appear to make sense in light of the currently amended claim language (see claim objections below). In addition to, any relevant remarks directed to the amended claim language using the word “directly” have been addressed in the previous discussions above.

Regarding claim 79, the Applicants arguments have been addressed in a similar manner to the arguments made regarding claims 40, 46 and 49 as previously discussed above.

### ***Claim Objections***

2. Claim 54 is objected to because of the following informalities: the claimed “transmitted” in the second to last line of the claim should be --transmitting--. Appropriate correction is required.

Claim 73 is objected to because of the following informalities: the currently amended claim language of “directly to a mobile cellular network transmitting means for transmission over the mobile cellular telephone network to and” does not make sense in view of the placement of the amended claim language in the context of the previously presented claim language. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 40-43, 47-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al (USPN 6,470,378).

Regarding claim 40, Tracton discloses a broadcasting service system (See Figs. 4, 7 and 9) for receiving television broadcasts (col. 7, lines 47-48 – MPEG encoded news broadcast, and col. 9, line 58 – col. 10, line 13 - where a common input device includes a satellite dish), and providing them directly to a mobile cellular network transmitting means to a mobile telephony terminal is met in-part by the support of other architectures including cellular-phone based browsers (col. 7, lines 26-53). Although Tracton does not necessarily disclose providing the television broadcasts directly to a mobile cellular network transmitting means, the server/client architectures shown and described in Tracton clearly indicate that once the broadcast is converted into the proper format, the broadcast is sent directly to the appropriate client device via

the corresponding network. Therefore, it would have been obvious to one of ordinary skill in the art to have provided the television broadcasts or converted format video and audio signal directly to the mobile cellular network transmitting means for the advantages of reducing the number of parts and processing involved, and providing the broadcasts to a mobile telephony terminal in less time. The claimed broadcast television receiver means for receiving a broadcast television signal is met by Figs. 4, 7 and 9, col. 7, lines 47-48, which discloses a MPEG encoded news broadcast, and col. 9, line 58 – col. 10, line 13, where a common input device includes a satellite dish, as previously described above. Although, the Tracton reference does not explicitly show receiving a broadcast television signal in the Figures, it is inherent and/or well known that interactive server systems can directly receive a television broadcast signal(s) (see content providers 41-44 and interactive server 5 of Fig. 1 in the Howe et al patent (US 6,502,242) as cited in this office action for example). The claimed a converting means (col. 7, line 35 – col. 8, line 5) for converting the received broadcast television signal into a video and audio signal (col. 4, lines 33-49, which may include an encoded news broadcast, also see col. 7, lines 47-48) in a format compatible with a signal and transmission standard of the mobile cellular telephone network as met by re-coding and scaling the broadcast using the MPEG-4 standard (see col. 5, lines 58-62 and col. 7, lines 26-28 and 35-67). It is inherent that a mobile cellular telephone network is wireless network, and Tracton discloses a system wherein the converting (col. 5, lines 58-62) means converts the television broadcast signal into a digital video and audio signal in a format compatible with the a signal and transmission standard of a mobile cellular telephone network (also see col. 7, lines 35-67 and col. 6, lines 3-7). As previously stated above and in previous office actions, the Traction reference clearly discloses that the

original source content 250 may be a MPEG encoded news broadcast or “television broadcast” that is sent to a server or “television [signal] receiver” which converts the signals into a format compatible with a signal and transmission standard of a mobile cellular telephone network as met by re-coding the MPEG-2 coding of the broadcast as a MPEG-1, MPEG-4, or other format/standard as needed for transmission to a cellular telephone or client based system (see col. 4, lines 33-49; col. 5, lines 58-62; col. 7, line 26 – col. 8, line 5). The claimed “and for providing the converted format video and audio signal directly to the mobile cellular network transmitting means” is met by the direct transmission discussion as previously described above. Further disclosed is the claimed mobile cellular network transmitting means (See Figure 9, 420) is adapted to transmit the thusly converted video and audio signal to a mobile cellular telephone network subscriber (442) via a transmission channel of the mobile cellular telephone network (444), since Tracton discloses supporting cellular-phone based devices (col. 7, lines 25-27), which reads on the claimed mobile cellular telephone terminal.

Regarding claim 41, Tracton discloses the claimed television broadcast signal complies with a first signal standard for television broadcasting, the converted digital video and audio signal formats compatible with the mobile cellular telephone network comply with a second signal standard, and the first and second signal standards agree with a signal standard which is capable of converting between different transmission systems as described above (see col. 4, lines 33-49 and col. 7, lines 51-65).

Regarding claim 42, Tracton further discloses a system wherein the first signal standard is the MPEG-2 standard, and the second signal standard is the MPEG-4 standard (col. 4, lines 33-49).

Regarding claim 43, Tracton discloses a system as stated above in Claim 40. The claimed converting means comprises a transcoder which includes a decoding means which decodes digital video and audio data complying with a digital television broadcasting standard and then encodes the thusly decoded video and audio data into a format compatible with transmission over a communication channel of the mobile cellular telephone network, and converting-controlling means which controls an encoding rate of the transcoder to comply with a transmission rate of the mobile cellular telephone network is met by the server 100 and scaler 252, which transforms source content into a format compatible with transmission over a channel of the network, and also controls the encoding rate to comply with the network/terminal (see col. 5, lines 58-62 and col. 7, line 25 – col. 8, line 5).

Regarding claim 47, Tracton further discloses a system wherein the transmitting and converting means transmits data through a connected transmission channel (444) between a mobile telephone subscriber terminal (442) and a base station (402) of the mobile cellular telephone network.

Regarding claim 48, Tracton further discloses a system wherein the converting and transmitting means transmit the video and audio signal through the communication network (444). It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port).

Regarding claim 50, Tracton discloses the mobile telephony terminal (col. 7, lines 26-28), as described above in claim 40, comprising a digital video and audio data reception means (See Figure 4, 112), a decoding means (106), which decodes the received digital

video and audio data received from the digital video and audio data reception means, and an outputting means which outputs the decoded video and audio signal (col. 9, lines 6-20), as stated above in Claim 40.

5. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al., in view of Margulis (USPN 6,263,503).

Regarding claim 44, Tracton discloses a system as stated above in claim 40. Tracton does not explicitly disclose the converting means includes a digital signal converting means which converts an analog television broadcast signal into digital video and audio data... Margulis discloses a wireless television system (See Figure 1) that accepts a variety of inputs including analog audio/video (122 and 128). The input is then processed into a format that is compatible with the wireless client (col. 7, lines 36-44). The analog data is further digitized during this process (col. 7, lines 54-56). Therefore it would have been obvious to one of ordinary skill in the art to have combined the Tracton reference with the analog television broadcast conversion to digital capabilities of the Margulis reference for the advantage of providing the capability to convert analog broadcasts to digital and transmit the broadcasts over a mobile cellular telephone network. One of ordinary skill in the art would have been led to make such a modification since it is well known to convert analog broadcasts to digital in the art of television broadcasting. The Tracton reference teaches the additional claim limitations as previously described above in claim 43.

Regarding Claim 45, Tracton in view of Margulis discloses the claimed transmitting means includes a means for putting the formatted digital video and audio signal onto the

transmission channel of the mobile cellular telephone network, and a formatting-transmission means which formats and transmits the digital video and audio data with additional broadcasting information as described in the sections of Traction cited above in claim 43 (also see col. 6, lines 3-7), in addition Tracton discloses a transmitting means (See Figure 9, 420), which transmits the converted video and audio signals to a subscriber terminal (442) through a certain transmission channel of the mobile communication network (444).

Regarding Claim 46, Tracton does not disclose a broadcasting service system wherein EPG data is formatted and transmitted with the video and audio data with additional broadcasting information. Margulis discloses a wireless television system as described above. Margulis further discloses that EPG data is embedded in the television broadcast (col. 4, lines 44-55). This reads on the claimed EPG data is formatted and transmitted with the video and audio data and additional information. Margulis is evidence that ordinary workers in the art would appreciate the benefit of broadcasting TV data combined with EPG data to a portable display device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the system of Tracton with the television source and EPG data of Margulis in order to allow a user easy access to a wide variety of programming when a regular television is not accessible and provide the additional benefits associated with an EPG.

6. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al., in view of Peters et al. (USPN 6,246,430).

Regarding Claim 49, Tracton discloses a system as stated above in Claim 40. What is not disclosed however is the inclusion of an identifying means that identifies an individual mobile cellular telephone subscriber from among all subscribers of the mobile cellular telephone network, and a payment-demanding means that demands a payment corresponding to reception of the A/V signal for the identified subscriber. Peters discloses a video telephone system (See Figure 2) with a video *server* (col. 2, lines 32-34). The users of the video telephone must insert a chip-card into the video telephone, thereby identifying themselves to the device (col. 4, lines 1-12). A subsequent charge is issued for the purchase (col. 4, Line 14-16). Peters is evidence that ordinary workers in the art would appreciate the ability to identify an individual subscriber and charge for services in a video telephone system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton with the identification and charging of Peters in order to implement pay-per-view type services on a wireless video transmission system.

7. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al., in view of Margulis, in further in view of Legall et al. (USPN 6,005,565).

Regarding Claim 51, Tracton discloses the mobile telephony terminal (col. 7, lines 26-28) as stated above in claims 40 and 50. What Tracton does not disclose, however, is the mobile cellular telephone terminal includes a receiving-decoding means which receives and decodes an EPG signal from a converted television broadcast signal transmitted through the mobile cellular telephone network. Margulis discloses a wireless television system (See

Figure 1) that accepts a variety of inputs including analog audio/video (122 and 128) including a cable TV signal that is received by a cable decoder (col. 4, lines 22-29). The input is then processed into a format that is compatible with the wireless client (col. 7, lines 36-44). The analog data is further digitized during this process (col. 7, lines 54-56). EPG data is embedded in the television broadcast (col. 4, lines 44-55). It is inherent that the client be able to receive and decode the EPG signal in order to display it to the user, Margulis is evidence that ordinary workers in the art would appreciate the benefit of broadcasting TV data combined with EPG data to a portable display device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton with the television source and EPG data of Margulis in order to allow a user easy access to a wide variety of programming when a regular television is not accessible.

What Tracton in view of Margulis do not disclose, however, is a transmitting means which transmits a television channel selection request based upon the decoded EPG data to the mobile cellular telephone network. Legall discloses an EPG system (See Figure 2) where a user is able to search the EPG (i.e., various types of television broadcasts) and other sources of information (i.e., the internet, see col. 2, line 9 – col. 3, line 27) by issuing a search request to a search engine, which interacts with external information resources such as the Internet or television broadcasts (col. 3, lines 11-16). Further the system is operable to "offload" the handling of a search to the content provider so the receiving user's system does not have to perform the search (col. 5, lines 44-46). This reads on the claimed transmitting means which transmits a television channel selection request based upon the

decoded EPG data... Legall is evidence that ordinary workers in the art would appreciate the ability to search an EPG, including television broadcast information and web information, as well as have the capability to “offload” the handling of a search to the content provider as described above. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton in view of Margulis with the EPG searching of Legall in order to allow a user to quickly locate information of interest.

Regarding claim 52, Tracton further discloses a mobile telephony terminal wherein the mobile telephony terminal is a cellular phone (col. 7, line 27).

Regarding Claim 53, Tracton also discloses the mobile telephony terminal includes a browser (col. 7, lines 26-28) and a web server (col. 5, lines 16-19). Further, Tracton in view of Margulis, in further view of Legall disclose a system wherein EPG data is transmitted to the client as stated above. The combination of Tracton, Margulis and Legall would therefore disclose the utilization of the web server and browser to access and search the EPG data and additional information transmitted from the mobile cellular telephone network.

8. Claims 54-65 and 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis, in view of Kumar (USPN 2006/0105804).

Regarding Claim 54, Margulis discloses a broadcasting service system (See Figure 1) using a mobile communication terminal (158) comprising a digital video and audio input means (122, 128, 134), which receives digital A/V signals broadcast from a provider of the

pertinent information, a transcoding means for converting the digital video and audio signals into a format and transmission rate agreeable to a radio mobile communication system (col. 7, lines 36-64). The claimed “and provides the converted format video and audio signal directly to an allocating transmitting means” is met by the subsystem processor 518 processing and manipulating the received program sources 112 to generate the processed program information in a particular format that is compatible for downstream user by transmitter 324 and remote TV 158 as shown in Fig. 5 (see col. 7, lines 36-64 as described above). Margulis discloses a transmitting means (156) for outputting and transmitting the transcoded-converted digital broadcast signal provided directly to the allocating transmitting means. It is inherent that at least one transmission channel he allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port). Margulis does not explicitly disclose the use of a “mobile cellular telephone network”. However, Margulis does disclose that in alternate embodiments, remote TV 158 may be implemented as a personal digital assistant (PDA) device, a note pad personal computer or any other desired display device (col. 5, lines 27-34). In addition to, Kumar teaches the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Margulis with the cell phone/PDA device of Kumar for the advantage of integrating the features and capabilities of a cell

phone with the additional features and capabilities of a PDA into a signal integrated device which is well known to those of ordinary skill in the art.

Regarding claim 55, Margulis in view of Kumar disclose a system as stated above in claim 54. Margulis further discloses that the broadcasting service system includes EPG and additional data converting means that convert EPG data and additional information for selecting a digital broadcast channel into a format compatible with the mobile communication system (col. 4, lines 44-55 and col. 7, lines 36-64).

Regarding Claim 56, Margulis in view of Kumar disclose a system as stated above in Claim 54. Margulis further discloses that the broadcasting service system transmits the EPG data and additional information as the agreeable/compatible format to the mobile communication system (col. 4, lines 51-55 and col. 7, lines 36-64).

Regarding Claim 57, Margulis in view of Kumar discloses a system as stated above in Claim 54. The EPG data converting means inherently includes a decoder or decoding means which decodes the inputted EPG stream of the digital broadcast signals. Further, it is inherent that there be a restoring means for retrieving the decoded EPG data in order to broadcast it to the users. In any digital system where data conversion occurs, there is inherently a memory (See Figure 6) that is used to store data to be processed. This reads on the claimed database means that stores the information corresponding to the restored EPG data. Further Margolis discloses an EPG outputting means that outputs the EPG information from the data base corresponding to a subscriber request and a converting means that converts the additional information of the digital broadcast into a format agreeable to the mobile radio communication system (col. 4, lines 51-55).

Regarding Claim 58, Margulis discloses a broadcasting service system (See Figure 1) using mobile subscriber terminal (158) comprising a DSP means for receiving a digital broadcast signal and providing a broadcast program to a mobile communication network/system (col. 5, lines 15-19). Further disclosed is a media storage means (see Figure 6, 646) for storing the broadcast program processed by the digital signal-processing means (518). Further disclosed is a data processing and converting means for converting the EPG data and additional information processed by the DSP means into a signal format compatible with the mobile network/system as stated above in claims 54-57. Further disclosed is a transcoder (cols. 7-8, lines 36-10 and col. 8, lines 44-55) and transmission means (156) for receiving the A/V signals of the broadcast and additional information processed by the DSP means and converting it into a signal format compatible with the mobile...network/system and outputting it. As previously stated above in claim 54, Margulis does not explicitly disclose the use of a “mobile cellular telephone network”. However, Margulis does disclose that in alternate embodiments, remote TV 158 may be implemented as a personal digital assistant (PDA) device, a note pad personal computer or any other desired display device (col. 5, lines 27-34). In addition to, Kumar teaches the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Margulis with the cell phone/PDA device of Kumar for the advantage of integrating the features and capabilities

of a cell phone with the additional features and capabilities of a PDA into a signal integrated device which is well known to those of ordinary skill in the art.

Regarding Claim 59, Margulis in view of Kumar disclose a system as stated above in Claim 58. Margulis further discloses that the DSP means includes a tuner (120, 132) for selecting the digital broadcast signal received from the transmission medium (such as a television broadcast (128), satellite broadcast (134) and cable broadcast (122)). It is inherent that these tuners have a demodulating means (612) for restoring the selected digital broadcast signal. Further disclosed is a demultiplexer (col. 11, lines 42-46) for fetching the EPG and additional information from the demodulated signal, and a decoder for decoding the A/V signals (See Figure 5, 538).

Regarding Claim 60, Margulis in view of Kumar disclose a system as stated above in claim 58. Margulis discloses that the data processing and converting means includes an EPG and additional information data decoding means as stated above in Claim 57. Further, Margulis discloses a signal converter, or converting means, as stated above in Claim 57. It is inherent that the signal conversion means have a protocol converting means for converting the converted EPG data into a protocol compatible with the mobile communication system in order for the client to be able to receive the EPG and additional information data.

Regarding Claim 61, Margulis in view of Kumar disclose a system as stated above in Claim 58. Margulis further discloses that the transcoder and transmission means include a transcoder (538) for transcoding the digital broadcast A/V signal into a format agreed with the mobile communication system. Further Margulis as combined with Kumar discloses a system that reduces the bit rate of the A/V data (col. 7, lines 65-67). This reads on the

claimed transmission rate control means for controlling the transmission rate agreeable to the mobile network. Further it is inherent that there be a converting means for converting the output of the data processing and converting means into a data protocol agreeable to the network in order for the clients to be able to receive the data properly. It is further inherent in such a digital system that there be a synchronization processing means for synchronizing information during transcoding and protocol converting such that time-based data be delivered in the appropriate order to the viewers. Further disclosed is a transmitting means (156) for transmitting the data in real time over the network/system. It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port).

Regarding Claim 62, Margulis in view of Kumar discloses a broadcast service method using a mobile communication terminal as stated above. Further disclosed is converting a broadcast signal including digital video and audio data into a format compatible with a signal and transmission standard of a mobile communication system; providing the converted format video and audio signal directly to a mobile cellular network transmitter; and transmitting the data to a subscriber through a certain transmission channel of the mobile communication system as stated above. Margulis further discloses formatting and multiplexing EPG data together with the transmitted video and audio data as stated above in Claim 54.

Regarding Claim 63, Margulis in view of Kumar disclose a method as stated above in Claim 62. Margulis as combined with Kumar further discloses that the converting

process includes the steps of converting A/V data of a digital broadcast into a data format agreeable to the standard and transmission rate of the mobile communications system as stated above and converting the EPG data and additional information as stated above.

Regarding Claim 64, Margulis in view of Kumar disclose a method as stated above in Claim 62. Margulis further discloses that the transmission process includes the steps of synchronization of the converted digital A/V data, EPG data and additional information as stated above. Further disclosed is converting the data into a protocol agreeable to the mobile communication network/system and allotting a certain transmission channel and putting the digital data corresponding to the protocol of the system on the channel as stated above.

Regarding Claim 65, Margulis discloses a broadcasting service method using a mobile subscriber terminal as stated above comprising transmitting a TV broadcast signal having multiplexed EPG data to a subscriber through a mobile communication system as stated above. It is inherent in such systems that the EPG data may be transparently pushed to the subscriber's terminal or downloaded upon request. Further, it is well known in the art that a channel may be selected by searching EPG data. Margulis also discloses converting the A/V data of a selected channel into the data compatible with the standard of the mobile communications system and providing the converted format video and audio signal directly to a transmitter; and transmitting the data through the channel of the system using the transmitter as stated above. It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port). As previously stated

above, Margulis does not explicitly disclose the use of a “mobile cellular telephone subscriber terminal and/or network”. However, Margulis does disclose that in alternate embodiments, remote TV 158 may be implemented as a personal digital assistant (PDA) device, a note pad personal computer or any other desired display device (col. 5, lines 27-34). In addition to, Kumar teaches the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Margulis with the cell phone/PDA device of Kumar for the advantage of integrating the features and capabilities of a cell phone with the additional features and capabilities of a PDA into a signal integrated device which is well known to those of ordinary skill in the art.

Regarding Claims 69-70, Margulis discloses a broadcasting service system using a mobile subscriber/communication terminal as stated above comprising an analog broadcasting reception means which receives an analog television broadcasting system as stated above. Further disclosed is a digital converting means which converts the analog broadcasting signal received by the analog broadcasting reception means into a digital signal and for providing the converted format video and audio signal directly to an allotting transmitting means as stated above. Margulis further discloses that the system includes an EPG signal and additional information abstracting means for abstracting the EPG signal and additional information and an encoding-converting means for converting the EPG signal and additional information into a signal agreeing with the mobile communication

network/system as stated above. An encoding-converting means is disclosed which converts the digital broadcasting signal converted by the digital converting means into a signal agreed with the mobile radio communication network/system and an allotting-transmitting means is disclosed which allots the converted digital broadcast signal by the encoding-converting means on the certain transmission channel of the system and transmits it as is stated above. Also, as previously stated above, Margulis does not explicitly disclose the use of a “mobile cellular telephone subscriber terminal and/or network”. However, Margulis does disclose that in alternate embodiments, remote TV 158 may be implemented as a personal digital assistant (PDA) device, a note pad personal computer or any other desired display device (col. 5, lines 27-34). In addition to, Kumar teaches the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Margulis with the cell phone/PDA device of Kumar for the advantage of integrating the features and capabilities of a cell phone with the additional features and capabilities of a PDA into a signal integrated device which is well known to those of ordinary skill in the art.

9. Claims 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis, in view of Kumar, in further view of Peters et al.

Regarding Claims 66-68, Margulis in view of Kumar disclose a method as stated above in Claim 65. What is not disclosed, however, is a method wherein a right for

Art Unit: 2623

watching the digital broadcast is granted to a subscriber and the EPG information is provided to the subscriber after confirming and certifying the right. Peters discloses a video telephone system (See Figure 2) with a video server (col. 2, lines 32-34). The users of the video telephone must insert a chip-card into the video telephone, thereby identifying themselves to the device (col. 4, lines 1-12). A subsequent charge is issued for the purchase (col. 4, Line 14-16). This reads on the claimed right for watching the digital broadcast is granted to the subscriber. If the user does not authenticate, the video telephone unit remains locked (col. 4, Line 4). This reads on the claimed providing information to the subscriber after confirming and certifying the right. Peters is evidence that ordinary workers in the art would appreciate the ability to restrict access to content based on subscriber identification and payment in a wireless television system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Margulis in view of Kumar with the identification, payment and privileges of Peters in order to prevent unauthorized access to certain content in a video telephone system.

10. Claims 71-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis, in view of Kumar, and further in view of Tracton et al.

Regarding Claims 71-72, Margulis in view of Kumar disclose a system as stated above in Claim 69 as well as claim 70. What is not disclosed, however, is the use of the MPEG 4 format. Tracton discloses a system wherein data sent to the mobile communication network is in the MPEG 4 format (col. 4, lines 45-49). Tracton is evidence

that ordinary workers in the art would recognize the benefits of using the low bit-rate MPEG 4 format in a limited bandwidth network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Margulis in view of Kumar with the MPEG 4 format of Tracton in order to further conserve bandwidth.

Regarding Claim 73, Margulis discloses a mobile communications subscriber terminal as stated above comprising a TV broadcasting reception means (See Figure 7, 724), that receives a broadcasting signal that includes motion picture information as stated above. Further disclosed is a decoding means (732), which restores the received broadcast signal by the broadcasting reception means. An outputting means is disclosed (212) which outputs the restored broadcast signal by the decoding means for being watched on the mobile radio communication system. A selecting means (See Figure 3, 312) is disclosed for selecting the broadcasting signal reception mode.

What is not disclosed, however, is a communication processing means that receives a call signal provided to the mobile cellular telephone network and restore-outputs the call signal, and coding-outputs a subscriber call signal through the mobile cellular telephone network. Kumar discloses the use of “smart cell phones” which are devices that combine the capabilities of cell phones and electronic organizers (i.e. PDAs, see pg. 1 [0004] and [0008], also see pg. 2 [0022]-[0025]) as previously described above. In addition to, Tracton discloses a mobile A/V reception device as stated above that may be incorporated into a cellular phone (col. 7, lines 26-28). It is inherent in such phones that there be a communication processing means as claimed above. Further, in a cellular phone enabled

with mobile video reception, a selection means for selecting broadcast signal mode or mobile communication telephone call mode is inherent. Kumar and Tracton are evidence that ordinary workers in the art would recognize the benefits of using a cellular phone platform in a mobile communication subscriber terminal with video reception. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Margulis in view of Kumar with the communication processing means and selection means of Tracton in order to provide phone service as part of the mobile cellular telephone subscriber terminal.

Regarding Claim 74, Margulis in view of Kumar, and further in view of Tracton disclose a system as stated above in Claim 73. Margulis further discloses a system wherein the broadcast reception means includes an antenna (720) and a tuner (724), the decoder includes demodulation means (732) for demodulating video and audio signals of an analog television broadcasting signal selected from the tuner, and an outputting means includes a speaker (770) for outputting the demodulated audio signal and the mobile communication terminal (212) for displaying the demodulated video signal when the broadcast signal is an analog television broadcast signal.

Regarding Claim 75, Margulis in view of Kumar, and further in view of Tracton disclose a system as stated above in Claim 73. Margulis further discloses a terminal wherein the broadcasting reception unit includes a bit stream reception means (720) for receiving a bit stream from a terminal antenna and a digital broadcast signal, the decoder (732) includes a demodulation and restoring means (724) for demodulating video and audio signals of the digital broadcast signal and restoring the demodulated video and audio

signals, and the outputting means (770) includes a speaker for outputting the restored audio signal on a monitor (212) for displaying the restored video signal on the mobile communication terminal when the broadcast signal is the digital broadcast signal.

Regarding Claims 76-78, Margulis in view of Kumar, and further in view of Tracton disclose a system as stated above in Claims 73-74 respectively. Tracton further discloses that the mobile communication subscriber terminal is a cellular phone as previously stated above.

11. Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al, in view of Peters, and in further view of Margulis.

Regarding claim 79, the claim is rejected based on the combination of the Tracton, Peters, and Margulis references, as previously described above in the rejection of claims 40, 49 and 46, which are related in a similar manner to the limitations of claim 79.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hendricks et al (USPN 5,559,549) – Discloses a television program delivery system where signals are sent directly from a network controller to a television receiver system 220 (see Fig. 3).

Howe et al (USPN 6,502,242) – Discloses a system and method for providing television services (see Fig. 1).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoye whose telephone number is **571-272-7346**. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

**Any response to this action should be mailed to:**

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Michael W. Hoye  
February 3, 2007



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